

## II

### THE SCIENCES OF LIFE AND THE ETHICAL CODE

WE have taken it to be a legitimate division of labor in the world of thought if science confines itself to answering the question What exists? and leaves to some other hands the answer to the question What is good? or What ought to be? But we have also seen that when science turns its attention to man, and asks what the facts are in his case, it is bound to find among those facts man's valuations—his preferences and his conscience. What men do in fact prefer and approve is part of the factual picture of the world. By questionnaires and statistical methods it is possible to tabulate an average opinion on matters of value, or to plot a trend curve of moral judgments. And always men will find such data relevant to their own opinions on what is valuable or right; some will identify the average judgment with the normal judgment.

This process of extracting standards from facts obviously leaves us without a standard to judge or to improve the facts. In this sense it is literally an ethically passive or idle attitude, and leaves custom master of the field; while it puts those who would alter custom always in the wrong. It is a "realistic" attitude, one which takes the world as it finds it, refrains from deviating, still more from reforming, and makes its own adjustment to the way men and things are.

It has the natural disadvantage that custom at one time or place is not custom at another; hence realism delivers us

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over to relativity. Slavery was right among the Greeks because it was the custom and was also factually approved; even Saint Thomas was inclined to follow Aristotle in his judgment on this point. But later on, the consensus wavered; Gallup polls of 1750 and 1800 and 1850 on this point would have showed increasing uncertainty. How then would realism extract from the facts a standard? In spite of ourselves we should have to recognize that the facts of prevalent opinion still leave the question What ought to be? unanswered.

Once we see this, we take the further step and say that no matter of fact, even of the facts of human opinion, can evade the further question whether it is right. No state of things or of thoughts is so well established that it can frown down the challenge, "Are you what you ought to be?" This free-lance question is always in order! And it is never to be settled by another appeal to the *status quo*.

We admit the gap between "is" and "ought"; there is no escape. But is there no bridge? At least, there are attempts, and from both sides of the gap. Men of science do build ethical codes, which seem to them inspired by the facts of the world; they cross over from "is" to "ought." And there are theorists of value, who explain the meaning of "ought" in terms of what exists; they cross over in the opposite direction. It may be that neither of these operations is defensible. But we are bound to examine them, not for the purpose of finding fault with them, but for the purpose of finding whether they are on the trail of some important connection between these two sundered interests. That will be the work of this second lecture.

We shall begin with the codes proposed by the scientists

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or students of science. As a fact of biography, men of science have not alone set up codes for themselves but have sometimes published them and recommended them to others. We may go so far as to say that every scientist has an ethical code which defines his attitude toward his own work. This code can hardly be a scientific product, since it takes part in the creation of science; but there it is, as a highly effective and highly exacting demand. And beyond this, every scientist, as a man, has a code for his own conduct of life, derived from some source or other, often independent of his science but often sustained or illustrated by his results as a scientific thinker.

It is possible that the scientist is inconsistent in extracting ethical guidance from scientific fact; if so he would be showing himself human like the rest of us. But it is also possible that the assumptions he makes may show a connection between fact and value which we have not so far noticed. In either case we are bound to examine his procedures.

### I. THE BIOGRAPHY OF A SCIENTIST

I have in mind a physiologist, a friend, who, in the interest of just this problem of science and value, was willing to turn autobiographical for a half hour. He felt his experience to be representative widely of science today; and I think he was right on this point. As to metaphysics, he professed to be agnostic, since his scientific training had emphasized the importance of being able to say "I do not know." He felt it possible to say, however, as a sort of premiss, that he is a "representative of an evolutionarily successful species"; and it was evident that he was extracting from this fact of success some sort of blessing of Nature upon his ways of reacting (*feeling and acting*). But he also

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finds in himself reactions which have nothing to do with biological success, and so he confesses:

I find myself reacting to complex situations as a whole, and responding . . . in ways which are inexplicable on any scientific basis. I never expect to understand most of the things I value most highly—the thrill of a sunset, or a symphony, or the love I have for certain persons.

When it comes to building an ethical code, he seems to trust these non-scientific ways of feeling, not only for himself, but for others. He goes so far as to say that it is an empirical fact that “there is such a thing as the good life.” There is an empirical contrast between the lives of Socrates, Christ, Lincoln, on one hand, and Nero, Napoleon, Hitler, on the other. He can surely count on a large degree of emotional assent to this judgment; we shall have, however, to raise the question in passing, in what sense is this judgment empirical. For if goodness and badness are there in the facts in the same sense that Nazareth and St. Helena are there, ethical quality might become at once an object of science. But my friend is not proposing to leave this assertion unsupported, as a pure deliverance of the facts: he tells *why* he personally hates the social system associated with Hitler. There are certain values, “human dignity and kindnesses,” which to him are “the most important things in life”: Nazism threatens these values. And he believes that human history lends a certain corroboration to his personal scale of worths.

Is the validity of this scale, then, a matter of general agreement among men, or among reasonable men? Admitting as he does that there is at present a world conflict between “two irreconcilable viewpoints,” one making the individual a means to the state as end, the other making the state a means to the individual as end—the fact of the conflict would make hazardous any appeal to a consensus

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of opinion. If we are called upon to invest our lives and properties in an attempt to destroy Hitlerism, is it sufficient to point to the physiological fact that our reactions, sanctioned by our survival hitherto, are discovered to be hating reactions?

If this is all, then other groups of men, who find that their reactions, also sanctioned by their survival hitherto, set a state-compelled order and security above liberty, with its attendant difficulties and uncertainties, would have a similar ground for the other viewpoint, and there would be no way to settle matters but to fight it out: in the words of Justice Holmes,

Between two groups that want to make inconsistent kinds of world I see no remedy except force.<sup>1</sup>

I detect, however, in my friend's words a sign of dissatisfaction with his own attempt to base a code of ethics on the simple physiological fact of preference, similar preferences among similar groups of men, for he goes on to give still another reason for his view: the totalitarian makes his state a "false god" because, as he says, it "prostitutes science" as well as philosophy and theology. If I may venture to translate this figure, it means that a science which is not free to serve truth precisely as it sees it, with no concern whatever to promote the good of a particular government, is *not science*. In other words, science is so identified with a certain chastity of motive that if it loses this virtue it loses its very being. If this is true, there is a certain dialectical necessity in our condemnation of Nazism, to which the Nazis also must come, and we begin to discern a logic in value which may rescue it in the end from the shakiness of factual preference. But, having knocked on this door, our

<sup>1</sup>*Holmes-Pollock Letters*, edited by Mark DeWolfe Howe (Cambridge: Harvard University Press, 1941), Vol. II, p. 36.

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scientific friend does not enter it, and we are left with what we feel to be an admirable personal confession built on extra-scientific experience.

### 2. THE CODE OF FOLLOWING NATURE

I wish now to turn to certain codes avowedly based on science, which are offered for general acceptance. These are of two general types: one type, those which, viewing man as embedded in Nature, call upon him to take his guidance from Nature; the other type, those which set man in some contrast with the rest of Nature, and call on him to assert his own distinctive values.

The first type is brought into modern vogue by the development of biology and the vistas of evolution which go with it. The word "Nature" is an ancient link between fact and value. In the philosophy of Lao Tze, the great word is "Tao"; this mysterious symbol may be described as meaning the order of heaven and earth; a man is said to have Tao when he has this law within him, that is, to be right is to be natural. Wherever Nature is conceived as having her own laws which govern the growth of living things as well as the movements of the non-living, it becomes a standard of rightness to live "according to Nature"; and while, for us, it has become difficult to see what is "natural" for a self-conscious and therefore artificial creature like man, the word "unnatural" still stands for a severe condemnation. When the Stoics adopted the principle, "Live according to Nature," they were doubtless thinking of Nature as a living totality, in which thought as well as matter were present, so that the phrase "the intentions of Nature" has a literal meaning. For us, Nature has no intentions; yet it is as hard for a modern biologist as for Aristotle or St. Thomas to suppress the fancy that Nature

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has given some broad hints about what sound and healthy behavior is.

For strict empirical observation the distinction of end and means does not exist. The roots of a tree draw in and construct sap, which serves the nutrition of the tree: this is cause and effect, not means and end. Yet, as Kant long ago remarked, the system of processes in any organism so distinctly supplement one another, aid one another, and conspire to the life of the whole, that an observer can hardly tell what an organism is without saying that it is an assemblage of functions in which each is a means to all the rest and to the whole as ends. Three times out of four when a biologist turns moralist, he takes this picture of interdependence, cooperation, and totality as his model.

Thus Professor S. J. Holmes of California writes that "Morality becomes just one phase of the adjustment of the organism to its conditions of existence. As a good body is one which runs smoothly and efficiently in the maintenance of its vital functions, so a good man is one whose conduct not only maintains his own life on an efficient plane, but conduces to the enhancement of the life of his social group."<sup>1</sup>

In his *Data of Ethics*, Herbert Spencer made the first whole-hearted attempt to derive from the picture of evolution, organic and social, a rule of conduct for men. Arguing that all goodness must be good for something, instrumental to some end, he attempted something far more ambitious than to formulate the end which human societies may aim at: he attributed to evolution itself a definable direction, namely, the increase of life. The transformations within society, from the military to the industrial type of régime,

<sup>1</sup>S. J. Holmes, "Darwinian Ethics and its Practical Applications," *Science*, August 11, 1939, p. 122. Quoted by Professor C. Leake in "Science Implies Freedom," San Francisco, 1940.

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are deducible from this general aim, since military activity is mutually destructive. This development is at once moral and inevitable, and the individual human being is urged—not in hortatory terms, but in purely descriptive terms as to what constitutes “highly evolved conduct,” reminding one of Confucius’s method of conveying ethical exhortation by telling what the Superior or Princely man will do—to fall in with the direction of Nature as shown in evolution.

This system and its current criticisms have been before the public long enough so that every student is uneasily conscious that Spencer has not answered the question why our sympathetic accord with Nature’s direction must cease when the curve turns downward and the phase of Dissolution begins.

But even if we were justified in forgetting dissolution and Nature’s ultimate indifference to the “amount of life” in the universe, one can hardly refrain from wonder at the confidence with which these suggestions from organic life are brought forward as an adequate code of ethics, or indeed as any code at all.

The harmony of functions within an organism is not a voluntary harmony, at least, it is not so conceived in the customary metaphysical conceptions of the laboratory, which still incline to look for reality in the direction of the physical nexus of events. Society differs from any possible organism in the relative autonomy of the units to whom an ethical code might be addressed. To say that the moral man is one whose activity promotes relations within society like those obtaining in the organism itself is simply to say that men ought to accomplish freely that mutual help which, in the organism, Nature accomplishes unfreely. And this amounts to saying no more than this: that ethical conduct



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is conduct in which the antithesis between individual interest and social interest is finally solved. If this were true, it would be no code, but simply a statement of the problem which codes have to meet.

And it assumes that society *ought* to be an organism, which is more than doubtful. For the organic type of harmony is one in which the whole is actually the supreme end, which is precisely what the totalitarian asserts. Such an ideal is more nearly realized in relatively simple societies in which individual self-assertion is less radical. The direction of social evolution is toward the distinctness of individual men and toward an ever changing novelty of pattern in their impacts on one another, within a social frame which does not undertake to include in its own metabolism the whole, or even a major part, of their activities. More than that, in the more highly developed societies, the individual has the opportunity to *go wrong*! He is entrusted with powers which, if he uses them maliciously, may cause serious injury to his neighbors. He is allowed private property, which gives him an opportunity to manifest greed and inhumanity. Should society tighten itself up and deprive him of these possibilities of selfishness? Shall society take away free motion, free use of automobiles, since these liberties make it possible for its members to run amok? Or shall it take the line that free traffic with voluntary self-control in avoiding collisions is still better? The whole moral quality of human existence depends on the circumstance that men *could* go wrong and freely refrain from doing so, not on being cast into a right mould from which they cannot depart. For these reasons, society as a super-organism is a false ideal.

I say this with high regard for the strong case which Professor R. W. Gerard has recently made, in his address at the Fiftieth Anniversary Celebration at Chicago.<sup>1</sup> He

<sup>1</sup>R. W. Gerard, "Higher Levels of Integration," *Science*, March 27, 1942.

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unites in his picture the symbol of the organism and the direction of evolution as guides to an ethical code. He points out that

with evolutionary advance there is progressive emphasis on cooperation of unlike units relative to competition between like ones . . . a step towards differentiation of units and their reintegration into a cooperating whole has always been retained—presumably because it has survival value.

And he carries this principle over into the evolution of social forms:

As societies develop there is an indubitable trend towards greater cohesion—in the so-called democracies only less than in the avowed totalitarian states,

adding, since the apparent approval of the totalitarian direction lies on the surface of his argument, that

Reasons for not equating this trend with Naziism or any other existing dictatorship are developed elsewhere.

For the individual, the mental changes which accompany these trends in the structure of his super-orgs are indicated as the enlargement of his social psyche, a growth of altruism, associated with the functioning of his cerebrum, and with a willingness to be subordinated, not suppressed, exchanging old freedoms for new:

The individuals are imperceptibly conditioned to their social milieu . . . and . . . behave as they do with no feeling of coercion. . . .

I agree that changes of this kind are going on, and that in many respects they are desirable, even necessary changes. I cannot agree that they furnish us a code. They will be permitted to occur—now that we are alive to their presence—only in so far as the developed moral individual assents to them. The developed society is not one which secures its existence first and then the freedom of its members; the developed society risks its own order and welfare to the freely given loyalty of its members and accepts their free

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improvisation of new social relationships to a degree that would be fatal to any organic over-structure.

There is no phase of sub-human activity which can serve as a safe guide for the human moral code. We turn therefore to those proposals which take their cue from the differences between man and the rest of Nature, not from the analogies.

### 3. CODES WHICH PUT MAN IN CONTRAST WITH THE REST OF NATURE

It is well to recall that Thomas Henry Huxley deliberately abandoned the attempt to extract ethics from Nature. If men want gardens, they have a standing quarrel with Nature, which left to herself will pull every park and field back to forest. A modern society, if it is to express *man's* preferences, has to be likewise maintained as an artefact, in which a common plan and ideal replace the rule of impulse. This is what we mean by civilization.

When Nature developed that important tool for survival called the mind, she purchased the possibility of intelligent adaptation to unclassified situations, novel situations, and ultimately produced a creature not limited to a restricted habitat, fit to explore the depths of the sea and the stratosphere itself. But she paid a price for this versatility: that "mind," taken on as a servant of the organism, assumes control of the whole organism; it follows its own ends, recognizes no other ends except its own. Nature was able to set traps here and there, pleasures and pains to guard the most dangerous passes of choice and ensure against speedy death by willfulness of the supposed servant. But even in eating, man eats to please himself, not Nature. And beyond these simple organic necessities all the goods of civilization, and ethics with it, are *his* game alone.

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So Bertrand Russell, who would build an ethical scheme in full view of a scientific world-picture, allows Nature to draw the limiting outline of man's hopes, facing fully the prospect of universal death which opens before the race, but within those limits urges us to be free, to assume our due rule in that world of value where we are kings—since there is no one to dictate to us above or below. But as free choosers of our own moral rules, he issues to us an appeal to wisdom—for there are such things as foolish choices. The wise man, he thinks, will choose the non-competitive goods of love and knowledge rather than the competitive goods of wealth and mastery. The ethical law becomes a code of advice for rational choosers, based on an assumption that for all men alike the non-competitive relationship among valuers is itself intrinsically valuable. This assumption he does not support.

And for the ultimate motive which must sustain the discipline and self-restraint involved in all civilized living, Mr. Russell has only the picture of an heroic defiance of fate, a gesture of self-esteem amid the lonely regions of a universe silently, inexorably, unconsciously closing the episode of man's aspirations.

Mr. Russell's ethics is neither scientific nor unscientific. It is factual, in the sense that he takes human valuations as facts, produced in us by Nature. But these facts have the peculiarity of introducing a new polarity into the whole scene, charging all other facts with the invidious qualities of good and evil, better and worse. These qualities, though they express nothing but our own natures, have their own principles of structure, which it is wisdom to recognize—an autonomous structure having nothing to do with Nature. One might suppose that Mr. Russell is picturing man, in the presence of this realm of free rulership, as having

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floated well out and beyond the control of physical law. But no: for there stands his opening sentence in this discussion: man is a thing of Nature, not something in contrast to Nature: the laws of his action are the same laws as those which describe the motions of the stars and the atoms. After all, then, this freedom is only a pseudo-freedom: it all lies within the sphere of causal prediction; it alters nothing in the procession of physical detail. And this final appeal to the attitude of defiance and despair is but histrionic: for it lies not within our choice but in the control of iron necessity whether we pass out thus, or resentful and afraid, or simply weary of a hopeless fight, whose glorious achievements by the way there are none to record, none to celebrate, none to remember.

Just this effort of Russell's to decorate with solemnity the Dead End of human striving, which he takes as scientifically fixed, shows, however, one important link between fact and value. If that *is* the end, it makes a difference in *all* values.

What difference does it make?

Here I would like to bring forward a more serious witness than Mr. Russell. In his recent Gifford Lectures, *Man on his Nature*, Sir Charles Sherrington, the noted physiologist, represents in his last chapter that "Conflict with Nature" in which our moral problem is born. Man alone surveys as a whole the process out of which he comes and is able to estimate its inner suffering and cruelty:

Standing on his planet he, its own product, harbours rebellion against the process which has enthroned him.<sup>1</sup>

At this moment his "altruism is in bud." But there remains in him the "old primordial 'urge-to-live' " which continues

<sup>1</sup>Sir Charles Sherrington, *Man on his Nature* (New York: The Macmillan Co.; Cambridge, Eng.: The University Press, 1941), p. 388.

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that same course of conflict and self-assertion, and "life without 'zest-to-live' will assuredly perish." Hence there begins within our own nature a "great antinomy," in which the direction of altruism alone promises a degree of respite from the agony which has built the present living world. As to the ultimate outlook, Sir Charles seems to find the race confronted with the same probable Dead End foreseen by Russell. The demands of truth require us not to evade in thought the ultimate bleakness of the human position. There is no appeal beyond man for guidance or for help, since man is the summit of the intelligence of the universe, but this fact itself is, in Sir Charles' view, tantamount to *responsibility*. Since there is no God beyond us, we must make common cause, and share the task of reaching goodness and beauty with each other. Let me quote his words:

... it is a situation which transforms the human spirit's task, almost beyond recognition, to one of loftier responsibility. It elevates that spirit to the position of protagonist of a virility and dignity which otherwise the human figure could not possess. It raises the lowliest human being conjointly with the highest, Prometheus-like, to a rank of obligation and pathos which neither Moses in his law-giving nor Job in all his suffering could present. We have, because human, an inalienable prerogative of responsibility which we cannot devolve, no, not as once was thought, even upon the stars. We can share it only with each other.<sup>1</sup>

Thus to extract an "ought" from a factual situation is not for Sir Charles a scientific result: it belongs to what he calls "natural religion." But quite clearly, he finds here a passage from fact to value; and more than this, believes that the value thus found will or should evoke the same ethical response in all men.

### 4. WHAT ARE THESE ETHICISTS AFTER?

I am not sure that Sir Charles means to present us with one of the Dead-End pictures of the world. Perhaps he

<sup>1</sup>*Ibid.*, p. 404.

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means to leave the finale open. In either event he, like Russell, tries to induce us to forget it, as irrelevant to the interim in which human lives should be happier rather than more miserable, and lightened by beauty rather than sordid. From this there will be no dissent.

The only trouble is that it does make a difference whether in the total, something is achieved, and to this both Russell and Sherrington would seem bound to answer no. There will be a time, after the vanishing of human life, when the universe will be as if the human history had never taken place.

This seems to Sherrington not to alter the quality of our satisfaction in such enjoyment as we can have. For, as he says,

Even should mind in the cataclysm of Nature be doomed to disappear and man's mind with it, man will have had his compensation: to have glimpsed a coherent world and himself as item in it. To have heard for a moment a harmony wherein he is a note.<sup>1</sup>

One cannot refrain from questioning whether the world which brings forth man's conscious struggle only to pull aside the veil for an instant and then quench both struggle and vision could appear to him as either "a coherent world" or a "harmony." And if it appeared even as a momentary enlightenment qualified with an element of cruel mockery, would this result indeed deserve the name of "compensation"?

It is here that Nietzsche comes nearer to meeting the need for an ethical motive. For him, there is something to be accomplished—the overman—the next order of being beyond man. And for the sake of this result, Nietzsche, like an earlier and greater prophet, promised his followers not pleasure but suffering, not ease but severe discipline, not

<sup>1</sup>*Ibid.*, p. 401.

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peace but a sword. "Geist," he said, "Spirit is the life which cuts into its own life."

Now Nietzsche was not a natural scientist, yet he professed to take his clue from evolution. We might have put him into the first group—those whose ethics is a following of Nature, only, what Nietzsche saw in Nature as worth following was certainly not what Spencer saw, or Conklin, or Gerard: it had nothing to say about cooperation and harmony. He read into Nature an effort to get beyond itself, to make every form that had hitherto existed raw material for a better form to come.

So Nietzsche combines both types, those who follow Nature and those who set man apart; because for him man is just the line of battle through which Nature is making her way toward something which no past mode of life could suggest, and the problems which to us seem to promise nothing but the Dead End may for that higher being prove to have an outlet beyond.

It is evident that Nietzsche, though he declares that God is dead—the God of the skies and of tender Providence—is injecting a living trend into the course of cosmic history. It would be idle to describe it as a "purpose," this upward drive of his—thwarted in the end by his spectre of the Eternal Recurrence. Yet we may say that Nietzsche's ethic showed by its leap toward a prefigured accomplishment, that of the Superman, one essential element of a code, any code which can win the support of a human morale. And it is something, too, that he does not feel the need to repudiate *all* the harshness of Nature, nor to rest everything on an advance of sympathy: creatorship is, for him, the answer to both sympathy and struggle, containing something of both—involving a transformed sympathy and forgiveness:



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What thou hast done to me, I forgive;  
But what thou hast done to thyself, how can I forgive that?

.....  
The will of all great love is—the beloved to create.

It is the destiny of such wild genius as that of Nietzsche to tell no well-rounded truth, but to strike out here and there forgotten elements of rounded truth.

All in all, we gain from these codes that would follow Nature and from those that would cast off from Nature an impression that Nature says nothing which a scientifically dispassionate ear can take as a reliable ethical cue. There is something of prejudice in the listener which selects from a conflicting variety of suggestions among the facts those which it prefers to hear. But I am not sure that this process is either purely arbitrary or purely subjective, if what one hears is a *resonance*. For science alone, Nature has no intention and no ethical admonition: for a more intuitive perception, the total fact of Nature does seem to convey a dim "ought"—a summons to man to be himself, to detach himself from retrospective organic analogies, and equally to discount the laming prospect of the Dead End. It is as though Nature were saying, "If you could know me as I am, you would find in me something not alone to wonder at, but something also to be loyal to." This is not much, but it leaves hope of a passage from fact to value. We shall now take up the enquiry from the other end.

### 5. CAN "OUGHT" BE DEFINED?

None of the codes we have examined can defend themselves against skeptical analysis, and yet I think we should be dupes of our own skepticism if we did not recognize in all these efforts a sound instinct to join the "ought" in some way to what is. We may begin a tunnel from the other side of the hill, by analyzing the meaning of the term "ought,"

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in order to see whether the idea of "ought" will show some relation to what is.

Like the term "value," the term "ought" may well put up a claim to be indefinable. We have indeed a genus for it, the genus "value": but if we then attempt to say what differentiates it from other values, we can only light upon the "ethical" or "moral," which in turn relates to what we ought to do, and we complete the latent circle.

This indefinable character appears in our inability to explain an "ought" to anybody—man, child, or dog. A dog may be taught that he is not to put his paws on the table; and the "must not" in this case has first the purely pragmatic meaning that he will be punished if he does. If he is a dog of character he seems to get somewhat beyond that point: it is not that his act is punished, but that it is disapproved, which is quite different. And he may even reach the point of seeing that it is not alone factually disapproved—for unknown reasons—but *justly disapproved*, which is surely a great stride into the center of the moral mystery! If he ever arrives at a dim feeling that "this sort of thing is not done," that well-conducted dogs do not do it, he comes close to the edge of the moral "ought"! Whether any dog reaches this point, we shall never know.

The child follows the same course, but he arrives: he sees eventually *why* certain types of behavior are approved or disapproved; then he understands and can use the word "ought." But it is never explained to him: he has to recreate its meaning from his own inner resources.

The difficulty in defining ultimate terms of this sort is that we must either define them in terms of what they are or in terms of what they are not. To define them in terms of what they are is circular. To define them in terms of what they are not is false. For example, if we try to define

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the mind, we can define it in terms of mental states, which is circular, or in terms of behavior, which is false. If we insist on defining such terms we seem to be put to a choice between being inane or false. Which do you prefer? Most of the interesting novelties in recent philosophy and logic are the result of preferring the false definition to the fruitless one. The mind is certainly not behavior, but it is in the context of behavior, so that with an initial deed of violence the definer does succeed in finding something useful *about* the mind. Likewise all pragmatic, instrumental, and operational definitions are false: a concept does certainly not mean its consequences, nor what we do with it—otherwise the word “it” has no referent. But such definitions need only a slight turn to become true and fruitful as the circular definitions never can be, and we can avoid the element of falsity by being clear that we are not defining by essence, but by context. Accordingly, we shall not undertake to say what “ought” *is*, but point out certain situations in which its use is appropriate.

One common situation of this sort is that of pointing out to someone a good thing which “he ought not to miss.” Thus:

“Here is a good play—you ought to see it.”

“Jones is a competent man—you ought to consider him for your job.”

“There is a fine highway, shorter and better—you ought to go that way.”

In this use of the word there is a close agreement between prudence and morality, though still a difference. In terms of ordinary prudence, Smith *wants* to take the shorter and better highway. The word “ought” indicates that there is some hesitation, or habit, or lethargy to be overcome; and a man owes it to his total conception of a good life to make

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the effort to include in it the better rather than the easier course:

"Don't be stodgy: you ought to get up and see the sunrise."

"Ought" acquires a more distinctly ethical meaning when it contains some reference to what is the better course for others than oneself, as in this context:

"Here is a chap who needs your advice; you ought to find some time for him."

In both sets of cases there is a choice to be made between courses having unequal value. (It is assumed that this inequality is recognized both by the person who says "I ought" and by the one who says "you ought": unless such value-contrasts were in the field of common knowledge, any one would hesitate to say "you ought" to anybody else, and a large segment of human intercourse would fall to the ground!) The word "ought" refers to a demand—an intangible pressure—to act for the better rather than for the good.

Almost we are tempted to define the "ought" as a strain-function in a field of values—a force "constraining" us toward the better. But this would imply that we are being automatically wafted along toward the "right" choice; whereas it is part of the meaning of "ought" that the moving is all our own, and that we may very easily neglect the better for the good.

We must consider the "ought" rather as an indication than as a force, an indication weighted with advice or with admonition if it comes from a social environment, but otherwise weighted only with one's own concern for doing the better job, a sort of generalized love of workmanship. We might then represent the general situation in which the "ought" appears as follows:

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<sup>ought</sup> The better  
    ↙ The good

The specifically ethical form of the "ought" might be represented:

<sup>ought</sup> The better, as affecting another within my  
    ↙ field of free action.  
    The good, as affecting another (or the neutrality of inaction).

But there is a third use of the term. We have already mentioned the easy assumption we make that anyone can tell anyone else what he ought to do. The surprising thing is, not that this assumption fails from time to time, but that it works so well: family life would be impossible without it. But what happens when it fails? Suppose I say to you: "Good play—you ought to see it," and you rejoin "I don't care for plays." I am abruptly reminded that my confident "ought" was assuming that a good play had a settled objective value. When you remind me that this value is relative to the valuer, and that if you don't care for plays there is nothing I can do about it, I am baffled for a moment; but I may come back with another "ought"—"You ought to care for good plays!" Here one sets up a value as independent of my factual valuation, and addresses an "ought" not to my activities but to my valuations themselves!

The most disturbing and deep-striking "ought" in the world is that I ought to value things at their true worth. This involves that apparently hopeless demand, that I should care for some things that I do not care for, and vice versa: as—to return to our fundamental example—that I should love my neighbor when in fact I do not love him; nevertheless it is a demand which we are constantly acknowledging and attempting to meet. For it is always a source of shame—though we brave it out—if we have to admit that

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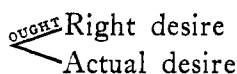
we do not appreciate a certain type of quality in the world, of which a good play may be taken as an example. Nothing is so disturbing in dealing with children as the suspicion that little Johnny cannot perceive the moral turpitude of a lie! —nothing so everlasting as the hope that someday he will change his valuations. He usually does. And thus he illustrates the reality of a value independent of factual valuations, which may hold an “ought” over them! “You ought to find lying hateful.”

Even so, this “ought” also is valid for me only because I can recognize it and attain it. Music ought to be enjoyed; but the deaf person has no moral duty to become an enjoyer of music. In every form, the “ought” must have its rootage in the actual, including those possibilities of the human self which are actual possibilities.

With this understanding, we may now define what we can mean by an “absolute” ought. It is based precisely on the fact that we discover relativity in ourselves, and that we do not wholly approve of it. The absolute ought applies to our desire, and our capacity, to alter our desires in such a way as to escape from the relativity of purely factual likes and dislikes. It means that every “ought” based on *prima facie* judgments of good and better alternatives is subject to revision, so far as those judgments are relative. Every actual preference is subject to criticism. Hence any attempt to find moral or other norms of judgment by statistical methods is at best an approximation; at worst, a house built on sand. It ignores the most important of all facts in the premisses, the desire of every mind to get beyond its own shiftily ethical impressions based on the wishes one may find in oneself on that morning when the questionnaire comes around.

This absolute ought, we may represent as follows:

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OUGHT  
Right desire  
Actual desire

To summarize our discussion so far:

When the existence of something better in the world depends on efforts which I can make (and which I alone can make), I "ought" to make those efforts.<sup>1</sup> And this formula holds good when the something better is a better state of my own desires.

The facts within which we have found the "ought" operating are not neutral facts: they are facts already loaded with quality and comparable as "better" and "less good." To this extent they depart from scientifically usable data: there are no physical measurements on the better-worse scale. They are none the less facts, though they involve a factor of quality. This is the point which Dr. Arnold Brecht makes in his paper on "The Myth of 'Is' and 'Ought' "<sup>2</sup>—far and away the best analysis of these concepts in their legal bearing that I have yet found.

There is, however, a simpler situation, purely factual, in which the "ought" comes into operation, that is, when any self finds among his objects another self. Immediately there is an obligation of some sort: I cannot treat that object as I treat a piece of furniture—his presence constitutes an "ought." I propose to sell my farm; but I remember that my farmer depends on me for his course of life—immediately I am less free. If you ask what it is that I ought to do about this other person, there is no specific answer except in terms that suggest truth-telling: I must treat him as what he is. If he is a sensitive thing I cannot treat him as if he were a log. If he has reason and can manage himself, I must deal with him by conversation, not by manhandling.

<sup>1</sup>This might be called a functional definition, though of a new pattern. It means looking for the function of a term within a given situation, not for its "effects" outside of its situation. It means finding the constant or invariant element in a variety of such situations, actual not verbal.

<sup>2</sup>*Harvard Law Review*, Vol. 54, 1941, pp. 811-831.

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It is much like another obligation which seems to spring directly from fact, that of making a true report. *The facts—all facts—put a spell on me:* I must remember them as they were, and I must speak of them as they were. There is an appeal to veracity in one's most literal relation to the most literal of facts, which is inseparable from one's self-consciousness and from one's personal identity. Falsify your story and you falsify yourself.

Put it this way: I am under a very primitive obligation to treat my world of experience as a world of real objects, not a world of private dreams; and because it is such, I cannot have it just as I would like to imagine it. I must respect it, just as it offers itself to me. Here we come very close to a foundation stone of the scientist's own creed. If we are right, we need nothing but ourselves and an object to have an "ought."

But one may still ask, why am I under any *obligation* to treat an experience as a sign of an *object*? Why am I under a duty to *think* instead of letting impression follow impression, to go through all the labor of building a consistent theory of this chaotic stream of materials in consciousness? The answer lies in putting our last two observations together. To tell myself the truth about things, and to recognize among these things some that are other persons, are bound up together. If I live a life of impressions I have neither objects nor companions. And a life of impressions would indeed be devoid of duty: there would be no "ought" in a pure stream of consciousness. But if there are companions to be had, I ought to have them! And if I have them, my world must become a common world.

We come thus upon an interesting result: that the tug of "ought" never comes solely from the "something better" as an abstract possible achievement; it comes from an in-



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terest on the part of *some other mind than our own* in what we do or desire. If any man could be truly and absolutely solitary, there would be for him no "ought": his better and worse would remain, but they would be matters of prudence, not of duty. If the last man in the world, just before its final destruction, were a chemist, and if that chemist were at work on an experiment which would possibly throw open to him the last secret of atomic structure, I imagine he would go ahead and finish the experiment. He would do it not as a duty, but for the sheer exultation of knowledge. But I am ready to wager, even if he were a British chemist, that he would not dress for dinner—not unless he felt that there were after all some other mind in the universe, as it were looking on!

That suspicion of residual mentality is hard to dispel. Around all our doings there hangs this fringe-conception: the world expects something of us, the world somehow expects every man to do his duty. This sense of an undefined outer concern in what we decide is very primitive, must, I think, be a part of the infantile equipment of awareness; for after all it is the infant and not we who has to build up its world of impressions into a shared world, to regard its space as a space in common with the rest of us, and the events which occur to it as phases of events which belong to the history of a community of persons. It is but a farther stage of the same awareness when human beings feel the call of the job as having a claim on them apart from their immediate inclination, and gives them a pride in workmanship, and an impulse to do in the way of perfection what no man could require of them. It belongs to this same awareness to conceive that truth has something inherently important about it; not only is truth for one the truth for everybody, but what is true remains true—so far as it is true—forever, whether we are there to know it or not.

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I think that the "ought" can be found in the very simplest factual situation, for there is none such that does not make some appeal to our will. But I think its most radical and satisfactory definition is found in the universal human situation, one that never comes nor goes because it is always there, the self on one side, the world on the other, and on both sides an attitude of *expectancy*!

That element of expectancy, to which "I ought" is a response, would be hard to demonstrate. It would be still harder to refute, if it happened to be true. And the scientist is one of the men who acts as if it were true. He acts as if there were an "ought" in the call to know, and as if the "ought" were there first!

### 6. IS FREEDOM AMONG THE FACTS?

Our analysis of the factual circumstances belonging to an "ought" appears to include the fact of freedom of choice. The whole point of an ethical code or injunction is lost unless it is possible for the hearer to heed or not to heed. There is no exception to this principle when it is a scientist who uses the "ought": he also assumes that his hearer is free. Sometimes he is bothered by the contrast between this assumption and the working-hypothesis of his laboratory that all phenomena are determined. As a rule, however, he is no more bothered than was Spinoza, whose great book on Ethics, teaching the strictest rule of necessity in all things, ends with a magnificent exhortation under the head of "Human Freedom," to achieve those excellent things which are "as difficult as they are rare."

Herbert Spencer is another example of the same lofty inconsistency, if it is such. In fact there are so many thinkers who are both determinists and also moralists that one begins to suspect something wrong in the insistence on freedom. Or is there something wrong in the insistence on determin-

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ism—except as a principle of method? The proposition that everything happens according to an absolutely fixed mathematical relationship to prior events can never be proved. That is one reason we get so hot about it: it is a proposition that needs protection.

In my view the question is an important one, and despite its antiquity it is capable of settlement. Its solution will remove one of the chief impediments in the relations between science and the world of values. For the present let me simply indicate how definitely freedom is required if the word “ought” is to have any sense. And let me come at it by way of another biography—which up to a certain point was a scientific one—my own.

In my younger days I had the full joy of an enthusiastic discipleship; I was fully convinced by Herbert Spencer's system of philosophy. Interest in Spencer's world-view chimed in very well with my active tastes which were turning toward engineering. It was in pursuit of these interests that I went to college at Ames, Iowa, working at mathematics, and in the laboratories of physics and chemistry.

Perhaps I might have been called in these days a budding scientist: it was certainly not a bud that ever blossomed, but a comradely spirit is left for the labors of the workshop, and a kindly feeling for the smells of chemical and biological laboratories.

During all this time, happy in its positive activities, there was an undercurrent of desolation. I remained a devout adherent of Spencer's cosmological views. That belief was certainly no result of wishful thinking: I should have liked not to believe it. But it was convincing; its power lay in the continuity of interpretation, and the unifying of vast ranges of phenomena throughout the universe. The items which most required my reluctant assent were these:

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(a) The periphery of the universe dropped off. There could be no other world as a supplement to this one. The story of Nature was the whole story of the universe.

(b) Man is an animal, with some notable points of superiority in the scale of evolution, as measured by integration and differentiation. But he dies as the animal dies, and the race of man will be involved in dissolution, with the rest of life in this region of the universe.

(c) There is no genuine freedom.

I did not at that time draw the consequence that nothing has any meaning at all—since if the whole has no meaning, the parts cannot preserve significance—I was ready to accept the evolutionary substitute, the direction of cosmic change (or one direction of the rhythm of change) as indication of a certain value-scale embedded in Nature. Spencer had succeeded in investing the universe with one magnificent certitude: that there is an impenetrable mystery at the heart of things, an Unknowable. And while the presence of The Unknowable in no way altered the grim fate of man, it left open the imaginary possibility that there could be an Unknowable Meaning in the whole affair.

During the course of my studies in Ames, various things occurred to jar that picture. One was an introduction to a new book on psychology. This was in 1895. The author was William James. I had never heard of him. The librarian told me the book was well spoken of.

It is hard to analyze the nature of the jar which my fascinated reading of James administered to the dominion of Herbert Spencer. I do not remember any particular thing I learned from that reading; but it brought me a great sense of relief. It was evident that James had a scientific conscience: he was looking at the mind, just as Spencer was, as a thing of Nature. But he was telling more truth about

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the mind than Spencer did: he was devoid of the vanity of supposing himself fully on top of his object, having it finally explained. If the mind was too much for him at any point, he admitted it. The scientific problem of psychology gained some of the joy of good sportsmanship—the fish had a chance. And James seemed to enjoy the twofold rôle of the psychologist in that sport, that of being both the angler and the fish at the same time!

The experience was not one of being emancipated from science; to go back on science was a logical impossibility. But I did feel that the weight of an unnecessary negation had been lifted. Spencer had negated the right to enquire beyond what science in its positive aspect could show; science and knowledge were coextensive: the rest was unknowable. This is a claim which science does not make. It appears to support it by the general argument of displacement; where the scientific explanation is either given or to be hoped for, no other can be allowed. The principle of parsimony acted as a restraint upon speculative enquiry. James showed me the illegitimacy of that clamp, and especially as it related to one very crucial matter, the problem of freedom.

The merits of that problem will concern us in the next lecture. For the present, I raise only this question *ad hominem*: *Why is determinism depressing?*

There are some who have reached the point of denying that it is depressing. I think I see what they mean. They mean that it is not depressing to be a cog in a great machine. This is particularly the case if the great machine is in some sense a decent or respectable machine, not a mere heartless monster. Spinoza found it elevating to be lifted into the atmosphere of eternity by contemplating the sublime necessities of a universe in which the most perfect necessarily exists. So have many mystics felt it elevating to be admitted

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to participation, even to absorption and obliteration, in the life of the infinite and one. So has many a great man found it elevating to be a helpless instrument of Destiny.

It is not depressing to be a cog; it is not depressing to be insignificant. What is depressing is to be *only* a cog, an atom without spontaneity of its own, without any contribution hailing from oneself. So I leave this question, Why is determinism depressing?